cated veins and a fuscous costal margin. Hind femora cinereous, banded in the middle of the apical half with fuscous, followed by a subflavous pregenicular band; hind tibiae pale greenish yellow, sometimes with a genicular fuscous maculation or cloud.

Length of body, ♂, 25 mm.. ♀, 31 mm.; antennae, ♂, 12.5 mm., ♀, 14 mm.; tegmina, ♂, 25 mm., ♀, 29.5 mm.; hind femora, ♂, 13 mm., ♀, 16.5 mm.

16 ♂, 16 ♀. California, at Gazelle, Sept. 4–5, Tehama, Aug. 28, and Tulare, Aug. 5, A. P. Morse.

Hadrotettix nebulosus sp. nov.

Moderately stout; pale cinereous, more or less albescent. Head well rounded, not very prominent, the fastigium of vertex very obscure with no median carina, the frontal costa not very broad, feebly sulcate, punctate above; antennae a little shorter than the hind femora (♀), testaceous, infuscated in apical half by alternating bands of obscure fuscous. Pronotum brownish fuscous on metazona, pale cinereous on prozona, the lateral carinae bluntly rounded on metazona and hardly prominent; process of metazona rounded obtusangulate. Tegmina densely reticulated except the apical fourth, brownish fuscous at base, beyond dull cinereous, twice not very conspicuously banded with dull fuscous, with signs of a third band, and with obscure fuscous apical maculations; wings pellucid, fuliginous in a moderately broad band just beyond the middle, which is feeble in front, more marked behind, where it follows the hind border a short way toward the anal angle. Hind femora flavo-testaceous, twice banded interiorly with black or blackish fuscous, showing also above somewhat; hind tibiae pale reddish yellow, ringed at base with black and again obscurely in the middle of the basal half.

Length of body, 29 mm.; antennae, 13 mm.; tegmina, 27 mm.; hind femora, 15.5 mm.

2 ♀. Sinaloa, Mex., Koels (Behrens).

LIFE HISTORIES OF NORTH AMERICAN GEOMETRIDAE. — XII.

BY HARRISON G. DYAR, WASHINGTON, D. C.

Mecoceras nitocris Cram. The larva has not been previously described. Druce gives full references in the Biologia Cent.-Am., Lep. Het., ii, 94.

Egg. Cylindrical, the ends rounded, one end a little more taperingly so than the other; a scarcely perceptible flattening of the cylinder, parallel to the leaf as laid. Twelve neat low ribs, reaching almost to the smaller end, becoming dotted at termination; stopping abruptly at the larger (micropylar) end in a circle of large, quadrangular, indistinctly edged cells, at the inner angles of which are a circle of white dots, one for each rib. Within this the micropyle is somewhat coarsely reticulate. Ribs thickly crested with a double alternating row of white dots. Cross-striae fine, parallel, faint. Fine dark green; the ribs and circle of dots appear white. Size .65 × .55 × .50 mm.

Stage I. Head rounded, not bilobed, brown-black, not shining; width .3 mm. Body cylindrical, slender, feet normal; central parts of segments bearing tubercles i and ii larger, collared, 2-annulate, the intersegmental parts smooth; ends shrunken. Dark vinous, almost blackish, the slender, intersegmental parts of joints 5 to 9 pale, sordid whitish with dorsal and subdorsal vinous lines, so that the body looks obscurely dark vinous banded. Tubercles small; setae black, stiff, iv behind the spiracle; on thorax ia to

iib all separate, no subprimaries. A small trapezoidal cervical shield and rounded anal plate.

Stage II. Head broad, the lobes produced with short points directed forward; sutures impressed; dull, dark black-brown, a little mottled; secondary hairs present, short, black; width .5 mm. Body slender, the centers of the segments a little swollen; all dark blackish vinous with an olivaceous tint, under the lens obscurely finely lined longitudinally with darker ventrally. In the position of tubercle iv an elevated rounded dark spot. Segments centrally dorsally shaded with dark. Skin covered with fine, short, dark, secondary hair arising from black tubercles. Venter of joint 10 protruded, the segments finely annulate, all essentially as in the mature larva, though darker.

Stage III. With the characters of the mature larva. Head .7 mm. The black rounded stigmatal lumps and the paired posterior dorsal ones present on joints 8 and 9, the latter one smaller. Dark, blackish brown, a little lighter and greenish ventrally, peppered by the dark secondary tubercles. The fine secondary setae black. Head points distinct. The ends, joints 2 to 4 and 10 to 13, are nearly black. No marks nor lines.

Stage IV. Head bilobed, the lobes produced into cones with sharp tips curved forward, not long but pointing obliquely forward and outward; clypeus as high as two thirds of the front; cheeks rounded, quadrate below, mouth projecting. Blackish, dotted with pale, an irregular white fleck on the face of the lobe below the horn; densely covered with short, black, secondary pile; width 1.4 mm. Body as in the next stage, the color darker, less green, the prominences a little less pronounced.

Stage V. Head bilobed, the former points represented by slight elevations on the upper front side; color as before; width 2.1 mm. Body nearly cylindrical, the subventral fold distinct and arched on the segments; a pair of short, erect, black lumps on joints 8 and 9 in the position of tubercle ii, those of joint 8 the larger; a slight elevated black spot in the position of tubercle iv on joints 5 to 9; venter of joint 10 protruded. Body all densely covered with fine, black, secondary pile from small black tubercles, almost spiny on the dorsal elevations. Dull olivaceous green, the green predominating with growth, though some examples remain vinous to the last, shaded with brown, especially in the centers of the segments dorsally and on the posterior rims, darkest on the contracted end parts; a series of fine medio-ventral dashes; segments very obscurely 8-annulate; spiracles white, black rimmed; feet brown.

The larva pupates in the sand, spinning a very slight cocoon of silk. The slender light brown pupa has long projecting leg cases.

Food plant, *Coccoloba floridana*, only the young leaves being eaten. Larvae from Palm Beach, Florida.

SOME COCCIDAE QUARANTINED AT SAN FRANCISCO.

BY T. D. A. COCKERELL, N. M. AGR. EXP. STA.

Mr. A. Craw has recently sent me a fresh lot of Coccidae, which he detected on plants about to be landed at San Francisco; and it is interesting to note that, even after so many years of horticultural quarantine, new species are met with. Thus we can never know what new pest may arrive at our ports, the absence of an insect in the past proving nothing in regard to the future.

1. *Antonina crawi*, n. sp. — ♀ in a closely felted white sac, about 4 mm. long, with a long, white, brittle, glassy tail projecting from the hind end; ♀ removed from sac, 3½ mm. long, 1⅔ broad, subcylindrical, smooth,